

IN THE CLAIMS

1-33. (cancelled)

34. (new) An information processing device operable within a node of a hierarchical network of nodes having a hierarchical tree structure, said information processing device comprising:

storage operable to store one or more node keys, each node key being unique to one node of the network, and a leaf key, the leaf key being unique to the information processing device; and

an encryption processor operable to perform encryption processing to:

calculate a decryption key by decrypting a key block using at least one of the one or more node keys stored in the storage or the leaf key stored in the storage,

encrypt the decryption key using a first key unique to the information processing device, and

store the encrypted decryption key in at least one of the storage or on a recording medium.

35. (new) The information processing device as claimed in claim 34, wherein the first key is the leaf key stored in the storage.

36. (new) The information processing device as claimed in claim 34, wherein

the key block includes an encrypted renewal node key, and

the encryption processor is further operable to decrypt the encrypted renewal node key to obtain the renewal node key using at least one of the node key stored in the storage or a leaf key belonging to a lower layer of the hierarchical network, the leaf key being stored in the storage, and to calculate the decryption key using the obtained renewal node key.

37. (new) The information processing device as claimed in claim 34, wherein the encryption processor is operable to store the decryption key encrypted using the key unique to the

information processing device, the encrypted decryption key being stored together with a generation number, the generation number representing renewal information for the decryption key.

38. (new) The information processing device as claimed in claim 34, wherein the encryption processor is operable to store the decryption key encrypted using the first key unique to the information processing device, the encrypted decryption key being stored together with identification information, the identification information being unique to the information processing device.

39. (new) The information processing device as claimed in claim 34, wherein the encryption processor is operable to store the decryption key encrypted using the first key unique to the information processing device, the encrypted decryption key being stored together with identification information, the identification information identifying data decrypted using the decryption key.

40. (new) The information processing device as claimed in claim 34, wherein the decryption key is usable to decrypt encrypted content data in the information processing device.

41. (new) The information processing device as claimed in claim 34, wherein the decryption key is stored on the recording medium and the decryption key is assigned to the recording medium, the decryption key being usable to decrypt encrypted data stored on the recording medium.

42. (new) The information processing device as claimed in claim 34, wherein the decryption key is held in common by a plurality of the information processing devices, the decryption key being a master key usable to decrypt encrypted data in each of the plurality of information processing devices.

43. (new) An information processing device, comprising:  
storage operable to store a node key and a leaf key, the

leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure; and

an encryption processor operable to perform encryption processing to:

decrypt a key block using at least one of the node key stored in the storage or the leaf key stored in the storage to calculate a decryption key, and to

store the decryption key in the storage together with a generation number representing renewal information for the decryption key.

44. (new) An information processing device, comprising:

storage operable to store a node key and a leaf key, the leaf key being unique to the information processing device and the node key being unique to each node of a network of nodes having a hierarchical tree structure; and

an encryption processor operable to perform encryption processing to:

decrypt a key block using at least one of the node key stored in the storage or the leaf key stored in the storage to calculate a decryption key, and to

store the decryption key in the storage together with identification information, the identification information being usable to identify data decrypted using the decryption key.

45. (new) An information processing device, comprising:

storage operable to store a node key and a leaf key, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure; and

a decryption processor operable to perform decryption processing to:

detect whether an encrypted decryption key for decrypting

encrypted data is stored on at least one of in the information processing device or on a recording medium, and when the encrypted decryption key is detected, to calculate the decryption key by decrypting the encrypted decryption key, and

when the encrypted decryption key is not detected, to calculate the decryption key by decrypting a key block using at least one of the one or more node keys stored in the storage or the leaf key stored in the storage.

46. (new) The information processing device as claimed in claim 45, wherein, when the decryption key is not detected, the decryption processor is further operable to encrypt the calculated decryption key and to store the encrypted decryption key on at least one of the recording medium or the memory.

47. (new) The information processing device as claimed in claim 45, wherein the decryption processor is further operable to decrypt the encrypted decryption key using at least one key unique to the information processing device when the encrypted decryption key is detected.

48. (new) An information processing method, comprising:

storing one or more node keys and a leaf key in an information processing device of one node of a hierarchical network of nodes having a hierarchical tree structure, each node key being unique to one node of the network, the leaf key being unique to the information processing device;

decrypting a key block using at least one of the stored node key and the stored leaf key;

calculating a decryption key usable to decrypt encrypted data stored on at least one of the information processing device or on a recording medium;

encrypting the decryption key using a first key unique to the information processing device; and

storing the encrypted decryption key on at least one of the

information processing device or on the recording medium.

49. (new) The information processing method as claimed in claim 48, wherein the first key is the stored leaf key.

50. (new) The information processing method as claimed in claim 48, wherein the key block includes a renewal node key, the renewal node key being encrypted using at least one of the stored node key for the node or a leaf key belonging to a lower layer of the hierarchical network, and the decryption key is encrypted using the renewal node key, wherein the step of decrypting the key block includes decrypting the renewal node key using at least one of the stored node key and the stored leaf key, and the calculating step includes using the decrypted renewal node key to calculate the decryption key.

51. (new) The information processing method as claimed in claim 48, wherein the storing step includes storing the decryption key encrypted using the first key, the encrypted decryption key being stored together with a generation number, the generation number representing renewal information for the decryption key.

52. (new) The information processing method as claimed in claim 48, wherein the storing step includes storing the decryption key encrypted using the first key, the encrypted decryption key being stored together with identification information, the identification information being unique to the information processing device.

53. (new) The information processing method as claimed in claim 48, wherein the storing step includes storing the decryption key encrypted using the first key, the encrypted decryption key being stored together with identification information, the identification information identifying data decrypted using the decryption key.

54. (new) The information processing method as claimed in

claim 48, further comprising using the decryption key to decrypt encrypted content data in the information processing device.

55. (new) The information processing method as claimed in claim 48, wherein the decryption key is assigned to the recording medium and is stored on the recording medium, further comprising using the decryption key to decrypt encrypted data stored on the recording medium.

56. (new) The information processing method as claimed in claim 48, wherein the decryption key is held in common by a plurality of the information processing devices, the method further comprising using the decryption key as a master key to decrypt encrypted data in each of a plurality of information processing devices in the network.

57. (new) An information processing method, comprising:  
storing a node key and a leaf key in an information processing device, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure;

decrypting a key block using at least one of the stored node key or the stored leaf key;

calculating a decryption key used to decrypt encrypted data;

storing the calculated decryption key in the information processing device together with a generation number, the generation number representing renewal information for the decryption key.

58. (new) An information processing method, comprising:

storing a node key and a leaf key in an information processing device, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure;

decrypting a key block using at least one of the stored node key or the stored leaf key;

calculating a decryption key used to decrypt encrypted data; storing the calculated decryption key in the information processing device together with identification information, the identification information being usable to identify data decrypted using the decryption key.

59. (new) An information processing method, comprising:

storing a node key and a leaf key in an information processing device, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure; and

determining whether an encrypted decryption key for decrypting encrypted data is stored on at least one of the information processing device or on a recording medium,

when the encrypted decryption key is detected, decrypting the encrypted decryption key, and

when the encrypted decryption key is not detected, decrypting a key block using at least one of the one or more stored node keys or the stored leaf key and using the decrypted key block to calculate the decryption key.

60. (new) The information processing method as claimed in claim 59, further comprising using at least one of the one or more stored node keys or the leaf key to encrypt the calculated decryption key and storing the encrypted decryption key on at least one of the recording medium or on the information processing device.

61. (new) The information processing method as claimed in claim 59, wherein, when the encrypted decryption key is detected, the encrypted decryption key is decrypted using at least one key unique to the information processing device.

62. (new) A recording medium having a computer program recorded thereon for performing a method, the method comprising:

storing one or more node keys and a leaf key in an information processing device of one node of a hierarchical network of nodes having a hierarchical tree structure, each node key being unique to one node of the network, the leaf key being unique to the information processing device;

decrypting a key block using at least one of the node key stored in the storage or the leaf key stored in the storage;

calculating a decryption key usable to decrypt encrypted data stored on at least one of the information processing device or on a recording medium;

encrypting the decryption key using a first key unique to the information processing device; and

storing the encrypted decryption key on at least one of the information processing device or on a recording medium.

63. (new) A recording medium having a computer program recorded thereon for performing a method, the method comprising:

storing a node key and a leaf key in an information processing device, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network having a hierarchical tree structure, each node including at least one such information processing device;

decrypting a key block using at least one of the node key stored in the storage or the leaf key stored in the storage;

calculating a decryption key used to decrypt encrypted data;

storing the calculated decryption key in a memory of the information processing device together with a generation number, representing renewal information for the decryption key.

64. (new) A recording medium having a computer program recorded thereon for performing a method, the method comprising:

storing a node key and a leaf key in an information processing device, the leaf key being unique to the information processing device and the node key being unique to each node of a hierarchical network of nodes having a hierarchical tree structure, each node including at least one such information processing device; and

determining whether an encrypted decryption key for decrypting encrypted data is stored on at least one of the information processing device or on a recording medium,

when the encrypted decryption key is detected, decrypting the encrypted decryption key; and

when the encrypted decryption key is not detected, decrypting a key block using at least one of the one or more stored node keys or the stored leaf key and using the decrypted key block to calculate the decryption key.

65. (new) A recording medium as claimed in claim 64, wherein the method further comprises using at least one of the one or more node keys or the leaf key to encrypt the calculated decryption key and storing the encrypted decryption key on at least one of the recording medium or on the information processing device.

66. (new) A recording medium having information recorded thereon which is only readable by an information processing device having a decryption key, the decryption key being stored on the recording medium in encrypted form, the encrypted decryption key having been encrypted using a key unique to the information processing device, the encrypted decryption key being stored as a key storage table together with identification information for the information processing device.